AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Currently Amended) A composition comprising particulate tricalcium phosphate (TCP) having an average particle size of about 5 μm or less, an average crystal size of about 250 nm or less and a surface area of about 20 m^2/g or greater, wherein when the particulate TCP ~~can be~~ is densified to form an article having a minimum dimension of about 0.5 cm or greater ~~that is able to transmit~~ the article transmits about 50% or more light having a wavelength in the range of about 150 nm to about 1,000 nm.

2. (Original) The composition of claim 1, wherein the particulate TCP has an average particle size of about 1 μm or less.

3. (Original) The composition of claim 1, wherein the particulate TCP has an average crystal size of about 200 nm or less.

4. (Previously Presented) The composition of claim 1, wherein the particulate TCP comprises α-TCP.

5. (Original) The composition of claim 1, wherein the particulate tricalcium phosphate is densified.

6. (Original) The composition of claim 1, further comprising a secondary additive.

7. (Original) The composition of claim 6, wherein the secondary additive is present in an amount of between about 1% and about 50% by volume.

8. (Original) The composition of claim 6, wherein the secondary additive comprises a structural additive.

9. (Original) The composition of claim 8, wherein the structural additive comprises a metal oxide.

10. (Original) The composition of claim 9, wherein the metal oxide comprises zirconia.

11. (Original) The composition of claim 8, wherein the structural additive has an aspect ratio of about 2 or greater.

12. (Original) The composition of claim 6, wherein the secondary additive is an organic species.

13. (Original) The composition of claim 6, wherein the secondary additive is a polymeric additive.

14. (Original) The composition of claim 13, wherein the polymeric additive is selected from the group consisting of polylactic acid, polyglycolic acid, polylactic/polyglycolic acid copolymers, polypropylenefumarate, polyhydroxybutyric acid, polyhydroxyvaleric acid, polycaprolactone, polyhydroxycarboxylic acids, polybutyrene succinate, polybutylene adipate, collagen, chitosan, alginate, celluloses, starches, sugars, polypeptides, polyethylene glycols, vinyl pyrrolidones, acrylamides, methacrylates, copolymer micelles, and combinations thereof.

15. (Original) The composition of claim 6, wherein the secondary additive is a biological additive.

16. (Original) The composition of claim 15, wherein the biological additive is selected from the group consisting of plasmid DNA, RNA, proteins, bone morphogenetic proteins, and combinations thereof.

17. (Original) The composition of claim 6, wherein the secondary additive is a pharmaceutical additive.

Claims 18-68 (Canceled)

69. (Currently Amended) The composition of claim 1, wherein when the particulate TCP ~~can be~~ is densified to form an article having a minimum dimension of about 0.5 cm or greater ~~and having~~ the article has a compressive strength of 150 MPa or greater.

70. (Currently Amended) The composition of claim 1, wherein when the particulate TCP ~~can be~~ is densified to form an article having a minimum dimension of about 0.5 cm or greater ~~that is able to transmit~~ the article transmits about 70% or more light having a wavelength in the range of about 150 nm to about 1,000 nm.

71-77. (Canceled)

78. (Previously Presented) The composition of claim 1, wherein the particulate TCP comprises β-TCP.

79. (Previously Presented) The composition of claim 1, wherein when the particulate TCP ~~can be~~ is densified to form an article having a minimum dimension of about 0.5 cm or greater ~~and having~~ the article has a density that is 90% of the theoretical density or greater.

80. (New) The composition of claim 1, wherein the particulate TCP is produced using a wet chemical approach.

81. (New) The composition of claim 80, wherein the wet chemical approach comprises (i) precipitating a TCP precursor material from a solution containing a calcium salt and a phosphate source, (ii) recovering the TCP precursor material, (iii) milling the TCP precursor material to form a powder, and (iv) transforming the TCP precursor powder to form particulate TCP.

82. (New) The composition of claim 81, wherein the TCP precursor powder is transformed to particulate TCP by calcination.

83. (New) A composition comprising particulate tricalcium phosphate (TCP) having an average particle size of about 5 μm or less, an average crystal size of about 250 nm or less and a surface area of about 20 m^2/g or greater, wherein the particulate TCP is produced using a wet chemical approach, and wherein when the particulate TCP is densified to form an article having a minimum dimension of about 0.5 cm or greater the article has a density that is 90% of the theoretical density or greater.

84. (New) The composition of claim 82, wherein the wet chemical approach comprises (i) precipitating a TCP precursor material from a solution containing a calcium salt and a phosphate source, (ii) recovering the TCP precursor material, (iii) milling the TCP precursor material to form a powder, and (iv) transforming the TCP precursor powder to form particulate TCP.

85. (New) The composition of claim 83, wherein the TCP precursor powder is transformed to particulate TCP by calcination.